

TECHNICAL REVIEW DOCUMENT
for
RENEWAL of OPERATING PERMIT 99OPAR217

Waste Management of Colorado, Inc.
Denver Arapahoe Disposal Site

Arapahoe County
Source ID 0051291

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January – February 2007

I. Purpose:

This document will establish the basis for decisions made regarding the applicable requirements, emission factors, monitoring plan and compliance status of emission units covered by the renewed operating permit proposed for this site. The original Operating Permit was issued April 1, 2001, and expired on April 1, 2006. This document is designed for reference during the review of the proposed permit by the EPA, the public, and other interested parties. The conclusions made in this report are based on information provided in the renewal application submitted April 1, 2005. Please note that copies of the Technical Review Document for the original permit and any Technical Review Documents associated with subsequent modifications of the original Operating Permit may be found in the Division files as well as on the Division website at <http://www.cdphe.state.co.us/ap/Titlev.html>.

Any revisions made to the underlying construction permits associated with this facility made in conjunction with the processing of this operating permit application have been reviewed in accordance with the requirements of Regulation No. 3, Part B, Construction Permits, and have been found to meet all applicable substantive and procedural requirements. This operating permit incorporates and shall be considered to be a combined construction/operating permit for any such revision, and the permittee shall be allowed to operate under the revised conditions upon issuance of this operating permit without applying for a revision to this permit or for an additional or revised Construction Permit.

II. Description of Source

Denver Arapahoe Disposal Site (DADS) is a municipal solid waste disposal facility accepting non-hazardous waste. DADS is owned by the City and County of Denver and operated under contract by Waste Management of Colorado, Inc. Decomposing waste encapsulated within the landfill produces a gas that is primarily composed of methane and carbon dioxide. Emissions of non-methane organic

compounds (NMOC), which include, Volatile Organic Compounds (VOC) and Hazardous Air Pollutants (HAP), also result from the decomposition of solid waste placed in the landfill. A gas collection and control system is in place at this facility. Collected landfill gas is sent to an enclosed flare for control. Combustion emissions from the flare include Oxides of Nitrogen (NO_x), Sulfur Dioxide (SO₂), Particulate Matter (PM & PM₁₀) and Carbon Monoxide (CO). Fugitive particulate emissions are emitted from the following activities: material transfer to and from soil storage piles, disturbed areas, wind erosion, waste dumping, material transfer, and vehicle traffic on unpaved roads.

The facility is located at 3500 S. Gun Club Road in unincorporated Arapahoe County, Colorado. The area in which the plant operates is designated as attainment for all criteria pollutants. There are no affected states within 50 miles of the facility. Rocky Mountain National Park is a Federal Class I designated area within 100 kilometers of the plant.

Based on the information provided in the renewal application, the following changes have been requested:

- The source has updated the insignificant activity list.

The summary of emissions that was presented in the Technical Review Document (TRD) for the original permit issuance has been modified to reflect the most recent emission factors and emission estimates (based on historic waste acceptance rates).

Facility-wide emissions are outlined below:

Pollutant	Potential-to-Emit (tons/yr)	Actual Emissions – 2010 (tons/yr)
PM ₁₀	1.3	0.39
PM	1.3	0.39
SO ₂	10.0	8.40
CO	23.7	7.33
NO _x	15.5	10.17
VOC	39.6	15.10
HAP	22.6	8.47

The potential-to-emit (PTE) VOC emissions are calculated from EPA's Landfill Gas Emissions Model (LandGEM). This emission rate is based on the landfill's maximum design capacity estimated to be reached in 2082. Combustion emission PTE is based on the design rate of the flare. The actual emissions found in the table above are the emissions estimated to occur in 2010 and reported by Waste Management in the Operating Permit renewal application.

Compliance Assurance Monitoring (CAM) Applicability

The landfill does not utilize any control equipment subject to the CAM requirements. The VOC emission rate, prior to control in the flare, does not exceed 100 ton/yr and the flare is not subject to any emission limits due to the Grandfathered status of the landfill.

III. Discussion of Modifications Made

Source Requested Modifications

The insignificant activity list has been updated.

Other Modifications

In addition to the requested modifications, the Division has included changes to make the permit more consistent with recently issued permits, included comments made by EPA on other Operating Permits, as well as corrected errors or omissions identified during inspections and/or discrepancies identified during review of this renewal.

These changes are as follows:

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It should be noted that the monitoring and compliance periods and report and certification due dates are shown as examples. The appropriate monitoring and compliance periods and report and certification due dates will be filled in after permit issuance and will be based on permit issuance date. Note that the source may request to keep the same monitoring and compliance periods and report and certification due dates as were provided in the original permit. However, it should be noted that with this option, depending on the permit issuance date, the first monitoring period and compliance period may be short (i.e. less than 6 months and less than 1 year).

- Added language specifying that the semi-annual reports and compliance certifications are due in the Division's office and that postmarks cannot be used for purposes of determining the timely receipt of such reports/certifications.

Section I - General Activities and Summary

- Revised Condition 1.1 to have a more accurate description of the emission sources.
- Conditions 13 and 17 in Condition 1.4 were renumbered to 14 and 18 and Condition 21 in Condition 1.5 was renumbered to 22. The renumbering

changes were necessary due to the addition of the Common Provisions requirements in the General Conditions of the permit. In addition, General Conditions 3.d & 3.g (common provisions, affirmative defense) were added as a State-only requirement.

- Minor language changes were made to Condition 3.1 to more appropriately reflect the status of the source with respect to PSD.
- Based on comments made by EPA on another operating permit, the phrase “Based on the information provided by the applicant” was added to the beginning of Condition 4.1 (112(r)).
- Added a “new” Section 5 for compliance assurance monitoring (CAM).

Section II - Specific Permit Terms

- The requirement to calculate emissions from the landfill gas generation was changed from monthly to annually. The accepted method used to estimate these emissions does not generate valuable results with a monthly calculation. The method is designed only to accurately estimate emissions on an annual basis. However, flare combustion emissions must be calculated monthly.
- The waste acceptance tracking requirement was split out into Condition 1.2 and specified that an annual calculation is required.
- Modified the NSPS Cc, and Regulation No. 6, Part A, Subpart A, General Provisions language to be consistent with other recently issued Operating Permits for landfills.
- The Opacity requirement (Condition 1.5) was revised to match recently issued permits. A Method 9 observation is required if opacity is seen in the weekly check.
- Condition 2.1 was revised to more clearly and accurately represent the Regulation No.1 fugitive dust guidelines.

Section III – Permit Shield

- The citation in the permit shield was corrected.

Section IV - General Conditions

- Added language from the Common Provisions (new condition 3). With this change the reference to “21.d” in Condition 20 (prompt deviation reporting) will be changed to “22.d”, since the general conditions are renumbered with the addition of the Common Provisions.

- The upset language in Condition 3.d has been replaced with the affirmative defense provision for excess emission during malfunctions language.
- Removed the upset and breakdown provisions from Condition 4 (emergency provisions) since they are included in the Common Provisions.
- Condition 5 – “upset” was replaced with “malfunction”.
- The citation in General Condition 16 (open burning) was revised. The open burning requirements are no longer in Reg 1 but are in new Reg 9. In addition, changed the reference in the text from “Reg 1” to “Reg 9”.
- The definition of “prompt” has changed. Condition 21 has been updated.
- The language in 22d has been modified slightly.

Appendices

- Appendix B & C have been updated to the current version (02/20/2007). The requirement to determine if data was continuous has been removed from Appendix C.
- The table in Appendix F was cleared.